REMARKS

Reexamination and reconsideration of the application as amended are requested. Support for amended claims 9 and 12 is found in the specification, for example, in paragraph 19 concerning the ultrasound beam and in paragraph 34 concerning the second experiment (which uses initial control parameters identical to those of the first experiment of paragraph 33) wherein it is clear that the completion of the one minute treatment at the reduced ultrasound acoustic power density was without re-aiming the beam of ultrasound. It is noted that claims 1-8 and 14 were previously canceled.

The examiner's rejection of claims 9-10, 12-15 and 18 as anticipated, under 35 U.S.C. 102, or as obvious, under 35 U.S.C. 103, is respectfully traversed. The examiner rejects these claims as being unpatentable over Freundlich (US 6,618,620). Claim 10 depends from claim 9, and claims 13-15 and 18 depend from claim 12.

Amended claim 9 now requires an ultrasound beam at a first ultrasound acoustic power density to begin to thermally ablate a tissue ablation depth of an area of patient tissue and requires reducing the ultrasound beam to a lower second ultrasound acoustic power density, based on receiving an indication of an onset in the patient tissue of a transient, ultrasound-caused, ultrasound-attenuating effect, to complete the thermal ablation of the tissue ablation depth of the same area of the patient tissue without re-aiming the ultrasound beam. As described in paragraph [0034] of the specification for a second experiment having a one minute treatment time, wherein the first ultrasound acoustic power density was 84 watts per square centimeter, the onset of the ultrasound-attenuating effect occurred at 35 seconds, and the second ultrasound acoustic power density was 55 watts per square centimeter for the remainder of the one minute treatment, the tissue ablation depth was about 18 millimeters. Compare that to a tissue ablation depth of about 11 millimeters for an ultrasound acoustic power density kept constant at 84 watts per square centimeter throughout a one minute treatment as described in paragraph [0033] of the specification for a first experiment. The second experiment had an increased treatment depth for less total thermal energy compared to the first experiment.

Freundlich in figure 2, column 9, lines 25-34 and column 10, lines 6-10 discloses a planner 108. The planner 108 does uses an imager 114 to predict the lesion size (see column 9, lines 6-9 and column 8, lines 36-39). The planner 108 operates in an open loop mode in that it predicts a maximal temperature using a particular planned power and if the predicted maximal temperature exceeds an allowed limit, then the planner 108 scales down the planned power until the predicted maximal temperature is within the allowable limit. In this open loop mode, the planned power is based on predicting a maximal temperature. There is no changing of power in Freundlich based upon receiving an indication of an onset/occurrence in patient tissue of a transient, ultrasound-caused, ultrasound-attenuating effect.

Freundlich in figure 5 and column 10, lines 11-58 discloses the same planner 108 but the planner 108 is now being used in a feedback mode. The planner 108 will adjust its planning based on the feedback imager 502. The only adjustment in planning by the planner 108, based on using the feedback imager 502, which is taught, suggested or described in Freundlich is to adjust the treatment plan by adding treatment sites, removing treatment sites, or continuing to the next treatment site, or adjusting the thermal dose properties of some or all of the remaining treatment sites (see column 10, lines 53-58 and column 12, lines 6-27). Freundlich does not teach, suggest or describe using ultrasound at a first ultrasound acoustic power density to begin to thermally ablate a tissue ablation depth of an area of patient tissue and reducing the ultrasound to a lower second ultrasound acoustic power density, based on receiving an indication of an onset in the patient tissue of a transient, ultrasound-caused, ultrasound-attenuating effect, to complete the thermal ablation of the tissue ablation depth of the <u>same area</u> of the patient tissue <u>without re-aiming the ultrasound beam</u>, as required by applicants' claim 9. Freundlich only describes re-planning a second site based on feedback involving treatment of a first site which would require re-aiming the ultrasound beam from the first site to the second site to treat the second site.

Amended claim 12 now requires a beam of ultrasound beam at a first setting of a control parameter to begin to thermally ablate a tissue ablation depth of an area of patient tissue and requires the beam of ultrasound at a second setting of the control parameter, based on receiving an indication of an onset in the patient tissue of a transient, ultrasound-caused, ultrasound-attenuating effect, to complete the thermal ablation of the tissue ablation depth of the <u>same area</u>

of the patient tissue without re-aiming the beam of ultrasound. Applicants' remarks concerning the patentability of claim 9 over Freundlich are equally applicable to claim 12 and are herein incorporated by reference.

The examiner's rejection of claims 16-17 and 19 as obvious, under 35 U.S.C. 103, is respectfully traversed. The examiner rejects these claims as being unpatentable over Freundlich '620 in view of Itoh (US 4,757,820). Claims 16-17 and 19 depend from claim 12, and applicants' previous remarks concerning the patentability of claim 12 over Freundlich are herein incorporated by reference.

The examiner's rejection of claims 11 and 20 as obvious, under 35 U.S.C. 103, is respectfully traversed. The examiner rejects these claims as being unpatentable over Freundlich '620 in view of Ying (US 5,657,760). Claim 11 depends from claim 9, claim 20 depends from claim 12, and applicants' previous remarks concerning the patentability of claims 9 and 12 over Freundlich are herein incorporated by reference.

Additionally, with respect to claims 11 and 20, the examiner cites column 14, lines 52-67 in Ying as teaching using ultrasound to detect hyperechogenicity (scatter) to monitor ablation progress. Applicants respectfully disagree. Column 14, lines 52-67 of Ying uses ultrasound to detect hyperechogenicity (scatter) and states this could be used to predict lesion severity. According to WebMD's definition of a lesion, "... a lesion can be almost any abnormality involving any tissue or organ due to any disease or any injury." The lesion of Ying is clearly caused by disease and its severity is predicted by Ying. This is in contrast to a lesion caused by intentional injury to tissue from ablating medical treatment whose progress is being monitored. Ying does not teach, suggest or describe using ultrasound to detect hyperechogenicity (scatter) to monitor ablation progress.

Inasmuch as each of the rejections has been answered by the above remarks and amended claims, it is respectfully requested that the rejections be withdrawn, and that this application be passed to issue.

Respectfully submitted,

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